DOCUMENT RESUME

ED 113 701 CS 002 205

TITLE Improving Reading Through an Oral Language Program. Bulletin No. 39.
INSTITUTION Queensland Dept. of Education, Brisbane (Australia).
PUB DATE Apr 72
NOTE 22p.

EDRS PRICE MF-$0.76 HC-$1.58 Plus Postage
DESCRIPTORS Grade 5; Intermediate Grades; *Language Experience Approach; *Program Evaluation; *Reading Improvement; *Reading Instruction; *Reading Programs; Reading Research; Reading Skills; Remedial Reading

ABSTRACT

A language program was developed which was based on three areas of psycholinguistic abilities associated with auditory processes. The major aim of this study was to test the effect of this specially devised program on reading competence. Another aim was to test the effect of the program on reading attitude and spelling competence. Fifth grade children in two regular primary schools formed the sample. In one of the schools, average to above average readers were studied, while in the other school, average to below average readers were studied. It is concluded that (1) reading competence is influenced by primary language competence; (2) a remedial program in primary school reading is more effective if it includes language activities based on the auditory vocal aspects of primary language; (3) additional reading will not help children in the regular primary school who read below their chronological age; (4) the experimental group which made significant gains did so in the comparatively short time of seven weeks; and (5) spelling ability and reading attitude were not significantly changed by the oral language program during the seven weeks the program was in operation. (RB)

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BULLETIN No. 39

Improving Reading Through an Oral Language Program

CS 002 205

APRIL 1972

Research and Curriculum Branch,
Department of Education,
P.O. Box 33,
NORTH QUAY, Brisbane,
Queensland, Australia

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SUMMARY

Aim

The major aim of this study was to test the effect of a specially devised language program on reading competence. The three areas of psycholinguistic abilities on which the program was based were those associated with auditory processes.

The other aims were to test the effect of the special program on reading attitude and spelling competence.

Method

Grade 5 children in two regular primary schools formed the sample. In one of the schools, average to above average readers were studied. In the other school, average to below average readers were studied.

Matched samples of students within each school were assigned to the experimental oral language program and to a supplementary reading program.

The tests used as the basis for the selection of groups at both these schools were:-

ACER Junior Non-Verbal test of general ability

GAP Reading Comprehension tests, Forms B and R

A Reading Attitude test devised by the Research and Curriculum Branch

A spelling test based on Arvidson's New Zealand lists.

Results

1. Amongst children whose original reading performance was average to below average, gains in reading competence were significantly greater for those given the oral language program than for those given a supplementary reading program.

2. Improvement by the average to above average readers was not significantly greater for those given the oral language program than for those given a supplementary reading program.

3. Changes in reading attitude were small but negative during the seven weeks in which the program operated. There were no significant differences between the groups in the size of the change.

4. Improvements in spelling ability were not significantly different for the two groups.

Conclusions

1. Reading competence is influenced by oral language competence.

2. Remedial programs in primary school reading would be more effective if they included language activities based on the auditory aspects of primary language.

3. Conventional remediation techniques (i.e. extra reading for pupils experiencing reading difficulties) need re-appraisal.

1. INTRODUCTION

Research undertaken in Queensland with cerebral palsied, deaf, visually handicapped, and mentally handicapped children leaves no doubt that the reading of many pupils is retarded because of primary (oral) language deficits.[1] During the course of this research it has been observed moreover, that improvement in primary language transfers to reading.

A pilot study involving retarded readers with an I.Q. range of 90-109 in a fairly typical metropolitan primary school revealed major differences between good and poor readers in a number of the auditory subtests[2] of the Illinois Test of Psycholinguistic Abilities.

In view of these previous research findings it was considered that sufficient evidence existed to indicate that a specially devised language program based on auditory abilities would be likely to improve the reading competence of children in the regular primary school.

Teachers who had been involved in the research on language programs with atypical children commented that they had noticed an improvement in spelling following the children's experiences in the research program. It was therefore decided that the spelling competence of children exposed to language improvement programs should also be investigated.

The research and development work connected with language teaching was extended further in the present study with regular primary schools.

Sample Tested

Grade 5 children from two outer metropolitan schools were used in the experiment. One school had not been long established and was situated in a relatively low socio-economic area. From it, below average to average readers were selected. From the other school average to above average readers were selected.

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1. Bulletin 34: *Psycholinguistic Research in Queensland Schools 1961-66*, Research and Curriculum Branch, Department of Education, Queensland, 1968. p.48

2. ibid. p.46

Tests Used

The tests used as the basis for the selection of groups at both these schools were:-

ACER Junior Non-Verbal test of general ability.

GAP Reading Comprehension tests, B and R.

A Reading Attitude test devised by the Research and Curriculum Branch.

A spelling test based on Arvidson's New Zealand lists.

Conduct of the Study

From the results of these tests the students at each school were paired on the criteria of sex, age, general ability, and reading comprehension scores. At School A 23 pairs, comprising average to retarded readers were selected for inclusion in the program. At School B 29 pairs, comprising advanced to average readers were selected.

Finally, each pair of students was split and pupils were randomly assigned to either the experimental or the control group in each school.

The mean scores and standard deviations for the experimental and control groups from each school on the variables of age, intelligence, and initial test results for reading comprehension, reading attitude and spelling are shown in Table 1.

Only children for whom pre-test and post-test results were available were included in the analysis. The results of 18 matched pairs from School A and 26 matched pairs from School B were available.

Table 1: Characteristics of Matched Pairs in Grade 5 at Both Schools

		SCHOOL A			SCHOOL B		
		Experimental	Control	t*	Experimental	Control	t*
		N = 18	N = 18		N = 26	N = 26	
AGE	mean	10yrs 7mths	10yrs 8mths	.37(n.s.)	10yrs 1mth	10yrs 1mth	.03(n.s.)
	s.d.	6.4	7.7		5.0	4.9	
I.Q.	mean	108.1	104.3	.46(n.s.)	111.8	109.8	.98(n.s.)
	s.d.	12.6	10.1		12.2	11.5	
READING COMPREH.	mean	36.8	37.6	.74(n.s.)	49.7	50.6	.78(n.s.)
	s.d.	13.7	14.6		11.5	11.7	
READING ATTITUDE	mean	21.6	23.3	1.12(n.s.)	25.9	26.6	.41(n.s.)
	s.d.	4.9	4.0		6.8	6.2	
SPELLING	mean	14.6	14.8	.05(n.s.)	20.2	20.5	.25(n.s.)
	s.d.	5.9	5.9		4.0	3.2	

* t – test of significance of the difference between means

None of the differences between the matched pairs in the experimental and control groups on any of these variables was significant.

Experimental Group Activities

Time spent on the program. The experiment was conducted in both schools during a period of seven weeks. Lessons of 45 minutes duration were taken daily.

As a general rule 30 minutes of this time were spent on activity work and on exercises in which the class participated as a single group.

The remaining 15 minutes were spent on card material worked in small groups. Most of the card work was done orally, thus stressing the auditory vocal aspects as much as possible. Optimal group size was found to be two children for most activities, although there were some activities that required groups of three, four or eight children.

Lesson plans. The lesson to be taken each day was outlined on a sheet on which provision was made for entering the type of activity, materials used, notes on the lesson itself, and the corresponding psycholinguistic area.

As the program advanced and teachers became more skilful in coping with the material and their groups, they frequently diverged from their intended plan and pursued interests which developed during the lessons. Care was taken however to ensure that such developments were restricted to auditory vocal activities.

Group work. Both teachers and children showed a keen interest in the card activities during the course of the experiments. A few children who were reluctant to participate freely in the lessons taken by the teacher showed less restraint when working in small groups with cards.

In the latter stages of the experiment children from School B were very active in preparing their own cards for each of the three psycholinguistic areas. These child-constructed cards finally comprised a substantial part of the card system.[3] Reading of material on the cards was only an incidental activity. The primary purpose of this material was to involve the children in such activities as speaking, listening, thinking and acting.

Some problems were experienced with recording individual children's progress through the card material. Associated with this was the difficulty encountered in ensuring an equal concentration by the child on the various language areas dealt with in the cards.

The latter problem was effectively resolved by separating the activity cards into sub-groups which corresponded to the language areas, then assigning letters of the alphabet to each card in each sub-group.

Children recorded their progress in individual record booklets. The format of these was such that the child could immediately see for himself how many activities in each of the language areas he had completed. He could therefore regulate his selection of activities to ensure a balanced program.

To help ensure that the cards were of suitable difficulty and interest level, provision was also made in the record booklets for comments on the cards completed. Regular inspection of such comments, together with discussion with the children, enabled the teachers to make necessary adjustments to the cards and was of much assistance in the preparation of new cards.

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3. Sample activity cards made by both teachers and children are shown in Appendix 3.

Control Group Activities

While the children in the experimental group undertook language development activities, children in the control group had additional reading sessions. This involved reading from set books and supplementary readers.

The Retest

At the end of the seven week program, the reading comprehension, reading attitude and spelling tests were re-administered to all Grade 5 children in both schools.

2. RESULTS OF THE EXPERIMENT

Reading Comprehension

The major hypothesis was that the specially devised oral language Program would effect improvement in the reading competence of the children.

Evidence existed from previous experimental studies with atypical children indicating that such a program would be likely to be successful with children in the regular primary schools. Results are shown in Table 2, for performances on the test of reading comprehension.

Table 2: Pre-Test and Post-Test Scores for Reading Comprehension

	SCHOOL A		SCHOOL B	
	Experimental	Control	Experimental	Control
Pre-test Mean	36.8	37.6	49.7	50.6
Post-test Mean	43.3	40.8	57.6	57.1
Mean Gain	6.5	3.2	7.9	6.5
Mean Gain (months)	9 months	4 months	8 months	6 months
Mean Difference in Gains between Groups	3.3		1.4	
t	2.33*		.17(n.s.)	

* significant beyond the .05 level

Marked gains were reported for all groups in reading comprehension. The reading gains for the experimental groups however, were higher than for the control groups at both schools.

Whereas average progress in reading comprehension during the seven weeks would, presumably, have been approximately a 2 month gain, the progress of the control group at School A was double this (4 months) while that of the experimental group was more than double again (9 months).

A *t*-test of the gains made by the experimental and control groups in School A showed that there was a significant difference. Thus the introduction of a specially devised language program into School A resulted in a significant improvement in reading competence. The GAP Reading Comprehension test indicated that these children were of average to below average competence in reading before the experiment commenced. The language program rectified this to some extent, and, as will be shown later, brought the reading age of these children closer to their equivalent chronological age.

In School B both the experimental and the control group showed better than average progress. Although the mean gain made by the experimental group was greater than that made by the control group (8 months and 6 months respectively), the difference was not significant.

Since the pre-test scores indicated that the children in both the experimental and control groups at School B were reading in advance of their own chronological ages, the fact that the oral language program did not produce significantly greater gains than the supplementary reading program was not unexpected.

Pre-test and post-test reading ages and chronological ages for experimental and control groups at both schools are compared in Figure 1.

In School B, the pre-test and post-test results indicated that the mean reading ages of both the experimental and control groups were greater than their mean chronological ages. In School A, however, both the pre-test and post-test results showed the mean reading ages of the two groups to be below their mean chronological ages.

By the end of the program the experimental and control groups in School B were reading 11 months and 10 months above their chronological ages, respectively, and had made mean reading gains of 8 months and 6 months respectively.

In Figure 1 it can be seen that there was considerable improvement for the experimental group in School A as a result of the oral language program. Gains in the control group following supplementary reading activities were significantly less.

Further analyses of the data including both level of intelligence and sex as factors indicated that there were no significant differences between the gains made by the upper and lower halves of the groups on intelligence or between the gains made by males and females.

Slight changes in reading attitude were evident when the mean gains between the experimental and control groups at each school were compared.

Figure 1: Mean Pre-Test and Post-Test Reading Ages and Chronological Ages for Experimental and Control Groups at Both Schools

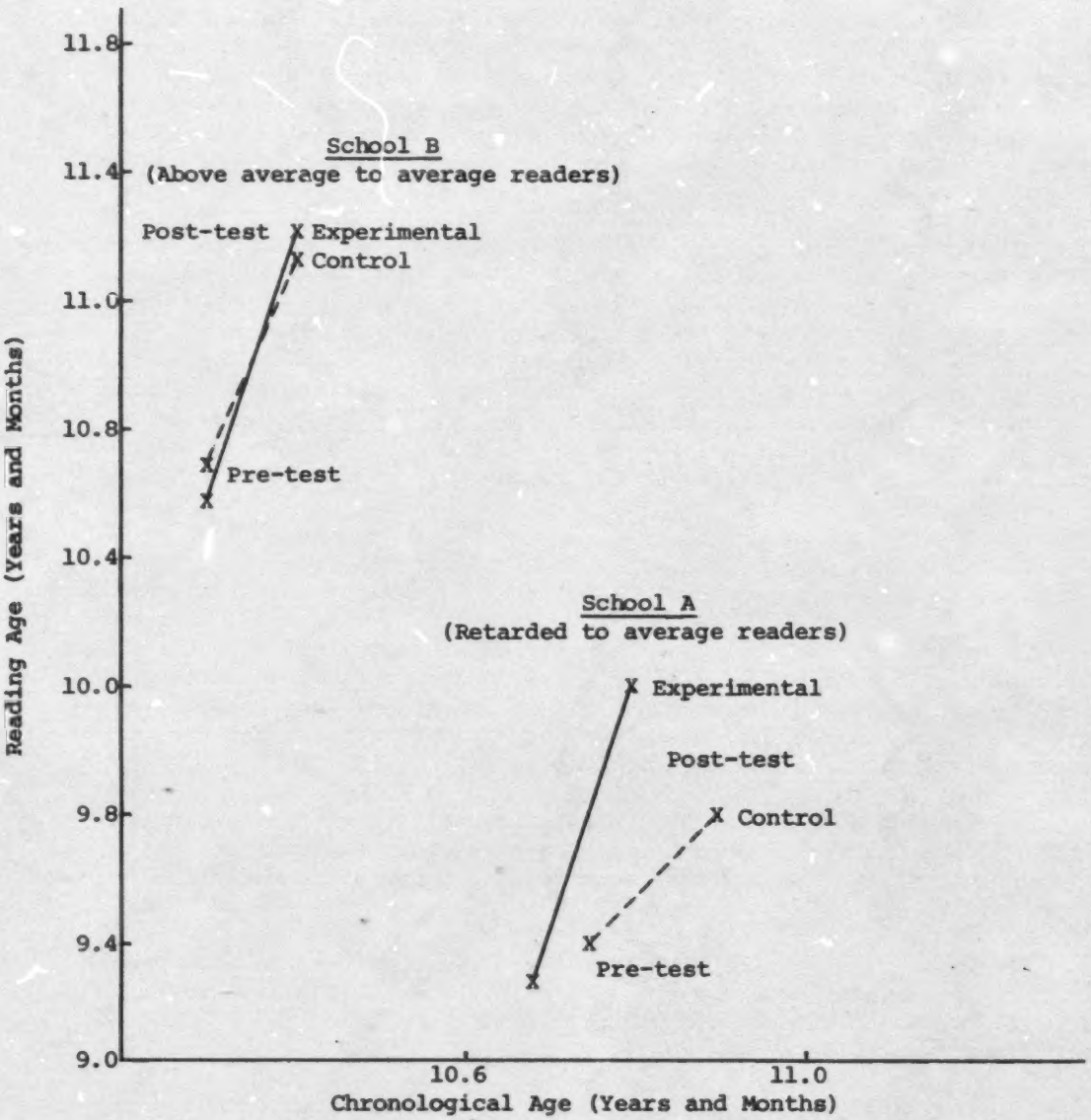

Table 3 shows these changes. It also indicates the results of the *t*-tests of gains made by matched pairs.

Table 3: Pre-Test and Post-Test Scores for Reading Attitude

	SCHOOL A		SCHOOL B	
	Experimental	Control	Experimental	Control
Pre-test Mean	21.6	23.3	25.9	26.6
Post-test Mean	21.3	22.3	24.9	25.4
Mean Change	0.3	1.0	1.0	1.2
Mean Difference in Changes Between Groups	.7		.2	
t	.24(n.s.)		.48(n.s.)	

The mean changes in attitude score for all groups were in the direction of less favourable attitudes. However, for neither school was the difference in mean change between experimental and control groups significant.

These results do not support the hypothesis that the specially devised language program based on auditory vocal abilities would effect improvement in reading attitude.

It must be noted, however, that the course was spread over a period of only seven weeks and the time spent on reading by the experimental groups was severely reduced during this time. Following an increase in reading competence, it may be that attitudes to reading do in fact change. However, this may not be evident in the short term. Further tests of attitudes towards reading following the re-establishment of the normal reading program with these groups could possibly indicate significant changes in attitudes.

Spelling Ability

All groups made slight spelling gains, the greatest gain being made by the experimental group in School A. The pre-test and post-test scores for spelling are shown in Table 4.

Table 4: Pre-Test and Post-Test Scores for Spelling

	SCHOOL A		SCHOOL B	
	Experimental	Control	Experimental	Control
Pre-test Mean	14.6	14.8	20.2	20.5
Post-test Mean	16.5	16.0	21.5	21.3
Mean Gain	1.9	1.2	1.3	0.8
Mean Difference in Gains between Groups	.7		.5	
t	.95(n.s.)		.89(n.s.)	

The *t*-test of the difference in gains made by the experimental and control groups indicated that the spelling gains were not significantly better for the experimental group in either school. The specially devised language program based on auditory vocal abilities did not, therefore, effect improvement in the spelling ability of children in the regular primary school.

3. CONCLUSIONS

In this study, it was hypothesized that a specially devised language program based on auditory vocal abilities would effect improvements, greater than those which result from supplementary reading activities, in the reading competence, reading attitude and spelling ability of children in the regular primary school.

A study of the performances of children in Grade 5 classes in two regular primary schools produced the following results.

Reading Competence

(i) The improvement of students, average to below average in reading ability, was significantly greater for students in the oral language program than for those in the supplementary reading program.

(ii) With students average to above average in reading ability, the improvements of students in the oral language program were not significantly greater than those of students in the supplementary reading program.

The general conclusions suggested by these results appear to be that:

(i) Reading competence is influenced by primary language competence.

(ii) A remedial program in primary school reading would be more effective if it included language activities based on the auditory vocal aspects of primary language.

(iii) Traditionally, the conventional remediation for children in the regular primary school with reading ages below their chronological age has been extra reading. The assumption has been that the more reading a child does the better reader he will become.

The results of the present study suggest that a re-appraisal of this view is needed. This conclusion is supported by the results of earlier research with physically and mentally handicapped children.

(iv) The experimental group which made significant gains did so in the comparatively short time of seven weeks. The results of this study suggest that an extended program would increase reading competence at all reading levels in the regular primary school. It would seem that a program of longer duration, or one which formed part of the normal English program, would be very beneficial to all children's reading.

Spelling Ability and Reading Attitude

(v) Spelling ability and reading attitude were not significantly changed by the oral language program during the seven weeks the program was in operation. Investigations over a longer period may indicate that there are, in fact, long term changes. This would appear to be a matter deserving further investigation.

APPENDIX 1

DEPARTMENT OF EDUCATION

RESEARCH AND CURRICULUM BRANCH - R I TEST (GR.5)

NAME: ..... AGE: ....yrs ....mths

SCHOOL: ..... GRADE: ..... DATE: .....

BOY/GIRL

PART A Practice Example: School holidays should be shorter.	YES	yes	don't know	no	NO
1. I like to read on holidays.					
2. Books with some pictures or drawings on every page are best.					
3. There are a lot of books in the library I want to read.					
4. I am a good reader.					
5. I like to read books to my family.					
6. I like to tell someone about stories I read.					
7. I'd like to read more books.					

APPENDIX 2

RESEARCH AND CURRICULUM BRANCH - SPELLING

Read aloud each complete sentence below and allow sufficient time for children to write in the missing words.

1. It was not easy to put the glove on the baby's hand.
   Write 'hand'.
2. My favourite colour is green.
3. The fire burned brightly.
4. John tried to put his boot on the wrong foot.
5. Many people went to the concert.
6. Bears love to eat honey.
7. The lion is a savage animal.
8. There was a hedge all round the field.
9. Jack was rude but Jill was polite.
10. There was a fountain in the park.
11. The hunter carried a rifle on his shoulder.
12. You can have a piece of cake for tea.
13. It is usually best to rinse soapy clothes in warm water.
14. She was certain that it would rain.
15. Let him peel the orange for you.
16. The mudguard on his bicycle was broken.
17. The children were asked to sing their favourite songs.
18. A bough of the tree was broken.
19. There was a comfortable mattress on the bed.
20. Mary cut the paper with the scissors.

APPENDIX 3

A. Teacher made card. This particular card formed the basis of a group activity with a child reading the words to competing groups of children.

AUDITORY VOCAL ASSOCIATION

No. 6

Put these words in their teams.

tent, stove, blouse, bed, rope, shorts, dress, poles, curtains, campfire, shirt, chair.

Clothes	House	Camping
.....	.....	.....
.....	.....	.....

Here are the beginnings of some sentences. Find the best ending.

Put its number in the spaces.

1. They want her to learn .....
2. Everyone stood up and .....
3. Father fixed the canoe with .....
4. The children ran to their .....
5. Ranu often makes .....

1. clapped and cheered
2. pen and pencil
3. dresses and blouses
4. hammer and nails
5. stop and listen
6. mothers and fathers
7. cooking and sewing
8. snake and crocodile

B. Child made card. Children worked on this card in groups of four.

AUDITORY VOCAL ASSOCIATION

No. 19

WRITING ADS

Think of words that you would use to sell WOSH, BROWN's BABY FOOD and CHUNKIER

Remember to use words that tell about taste, smell, sight, feeling or touch.

Made by Jacqueline Dodds